

ABSTRACT

Disclosed is a method of forming the isolation film in the semiconductor device. The method comprises the steps of sequentially forming a pad oxide film and a pad nitride film on a silicon substrate, forming a photoresist pattern through which an isolation region is opened, on the pad nitride film, etching the pad nitride film and the pad oxide film using the photoresist pattern as an etch mask, thus exposing the silicon substrate of the isolation region, implementing an electrochemical etch process to form porous silicon in the silicon substrate of the exposed isolation region, removing the photoresist pattern, and implementing a thermal oxidization process to oxidize porous silicon, thereby forming an oxide film in the isolation region.